L 27416-65
ACCESSION NR: AP5007519

The article includes general comments on how the Soviet machine-building industry fails to comply fully with government standards.

Orig. has 1 graph and 4 formulas.

ASSOCIATION: none

SUBMITTED: 00	ENCL: 00	SUB CODE: IE, GO
NO REF SOV: 006	OTHER: 000	JPRS

Card 2/2

DUNIN-BARKOVSKIY, I.V.; YAKUSHEV, A.I., doktor tekhn. nauk, prof., retsenzent; BEZMENOV, A.Ye., kand. tekhn. nauk, retsenzent; KARELIN, N.M., doktor tekhn. nauk, prof., red.

[Principles of interchangeability and technical measurements] Osnovy vzaimozameniaemosti i tekhnicheskie izmereniia. Moskva, Izd-vo "Mashinostroenie," 1964. 304 p. (MIRA 17:6)

KOLOMIYTSOV, Yuriy Viktorovich; DUKHOPEL, Ivan Ivanovich; TNYUSHIN, Aleksey Ivanovich; ARTEM'YEV, Igor' Vasil'yevich; YAKUSHEV, A.I., doktor tekhn. nauk, prof., retsenzent; GORDON, G.G., inzh., red.

[Optical instruments for measuring linear and angular dimensions in the manufacture of machinery; a reference book] Opticheskie pribory dlia izmereniia lineinykh i uglovykh velichin v mashinostroenii; spravochnaia kniga. Moskva, Mashinostroenie, 1964. 254 p. (MIRA 17:10)

YAKUSHEV, A.I.

Standards and the quality of machinery. Standartizatsiia 29 no.9:41-44 S '65. (MIRA 18:12)

YAKUSHEV, A.M., inzh.

Diaphragms which join steel crane girders with columns. Prom. stroi. 40 [i.e. 41] no.4:57-58 Ap '63. (MIRA 16:3)

1. Gosudarstvennyy proyektnyy institut po proyektirovaniyu, issledovaniyu i ispytaniyu stal'nykh konstruktsiy i mostov.
(Cranes, derricks, etc.--Equipment and supplies)

YAKUSHEV, A.M., inzh.

Increasing the bearing capacity of steel structures of a steel mill. Prom. stroi. 40 no.7:40-43 Jl '63. (MIRA 16:10)

1. Gosudarstvennyy institut po proyektirovaniyu, issledovaniyu i ispytaniyu stal'nykh konstruktsiy i mostov.

YAKUSHEV, A.M.; YAVOYSKIY, V.I.; KRYAKOVSKIY, Yu.V.; Prinimali uchastiye: TYURIN, Ye.I., kand.tekhn.nauk; KRAUZE, I.E., kand.tekhn.nauk; VISHKAREV, A.F., kand.tekhn.nauk

Effect of rare earth elements on hydrogen solubility in liquid iron. Izv. vys. ucheb. zav.; chern. met. 4 no.7:44-54 '61. (MIRA 14:8)

1. Moskovskiy institut stali.
(Iron—Hydrogen content)
(Rare earth metals)

S/130/61/000/012/002/006
A006/A101

AUTHORS: Yakushev, A. M., Kryakovskiy, Yu. V., Tyurin, Ye. I., Sorokin, S. F., Yavoyskiy, V. I., Glushtshov, M. V.

TITLE: The effect of rare-earth elements on flake sensitivity of structural alloyed steels

PERIODICAL: Metallurg, no. 12, 1961, 9-11

TEXT: There are only few data available on the effect of rare-earth elements on hydrogen behavior in iron and steel and the resulting defects. To complete these data, workers of the Moscow Steel Institute and the "Krasnyy Oktyabr'" Plant carried out a series of laboratory and industrial melts. They were assisted by L. N. Permyakov, M. P. Lapshova, O. D. Petrenko, V. G. Volnyanskiy, G. R. Opanchevich, V. A. Origor'yev and V. P. Bondarev. They studied the effect of the amount of rare-earth elements (0.3 and 0.5%) on hydrogen solubility in iron and the effect of the temperature on hydrogen solubility in alloys with 20% and more of these elements. The results have shown that it cannot be expected that rare-earth elements in the given amounts will eliminate defects of the steel; on the other hand, the increasing hydrogen sorption capacity at lower

Card 1/2

The effect of rare-earth elements ...

temperatures of alloys containing these elements leads to the expectation that they will bind the hydrogen liberated during the cooling of metal and prevent flake formation. These results were checked by the experimental melting of 37XC (37KhS), 38XCA (38KhSA) and 36G2C (36G2S) steels containing 6.3 - 8.0 cm^3/100 g hydrogen, ferrocerium with 94 - 96% Ce, misch metal with 45 - 55% Ce, 25 - 30% La and up to 15% other rare-earth elements. Ingots were heated for 4 - 6 hours at 1,150 - 1,180°C in bloomingpits and rolled into 400 - 500 mm air-cooled specimens, which were subjected to breaking tests and etching to establish their flake sensitivity. Results obtained are given in a table and show that the addition of rare-earth elements in amounts exceeding 2.7 kg/t prevent flake formation in 37KhS and 36G2S steel even in profiles of 195 - 225 mm section, under the condition that individual blooms be air-cooled. The experiment has shown that rapid cooling of the blooms will be possible due to the use of rare-earth elements. This will entail a number of economical and technical advantages. There are 1 table and 2 figures.

Card 2/2

35218

S/148/62/000/001/002/015
E071/E180

18.7130

AUTHORS: Yakushev, A.M., and Yavoyskiy, V.I.

TITLE: The influence of vanadium and boron on the solubility of hydrogen in liquid iron

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, 5, no.1, 1962, 52-56

TEXT: The influence of boron and vanadium on the solubility of hydrogen in liquid iron was investigated using an apparatus described earlier by the present authors and Yu.V. Kryakovskiy (Ref.1: Izv.vuz Chernaya metallurgiya, no.7, 1961) at hydrogen pressures of 18-41 mm Hg. The accuracy of the method was tested by measuring the influence of silicon on the solubility of hydrogen in iron. The results obtained agree well with the literature data. The solubility of hydrogen in liquid iron at 1560 and 1655 °C, as well as in solid iron near its crystallisation temperature, was determined. The respective solubilities were: at 1560 °C, 27.45 $cm^3/100g$, at 1655 °C, 30.80 $cm^3/100g$, and in solid iron 12.2 $cm^3/100g$. The influence of up to 9.3% vanadium was studied at 1560 °C. In liquid Fe + V alloys, the solubility

Card 1/2

The influence of vanadium and boron..

of hydrogen increases with increasing vanadium content, and for alloys containing up to 6% vanadium it is proportional to the square root of hydrogen pressure. The temperature coefficient of hydrogen solubility for the alloys is lower than for pure iron. Additions of boron to liquid iron (up to 0.2%) have no influence on hydrogen solubility.
There are 2 figures and 2 tables.

ASSOCIATION: Moskovskiy institut stali
(Moscow Steel Institute)

SUBMITTED: September 19, 1961

Card 2/2

IAKUSEV, A.M. [Yakushev, A.M.]; IAVOISKI, V.I. [Yavoyskiy, V.I.]

Influence of vanadium and boron on the solubility of hydrogen in liquid iron. Analele metalurgie 16 no.4:49-54 O-D '62.

SMOLYARENKO, V.D.; YAKUSHEV, A.M.; YERMITRAL, T.P.

Viscosity of lime-alumina slags with additions of SiO_2, MgO, and Na_3AlF_6. Izv. vys. ucheb. zav.; chern. met. 7 no.9: 63-67 '64. (MIRA 17:6)

1. Moskovskiy vecherniy metallurgicheskiy institut.

SMOLYARENKO, V.D.; YAKUSHEV, A.M.; YEDNERAL, F.P.

Method for measuring the viscosity of molten slags with an electric vibration viscosimeter. Zav. lab. 30 no.8:969-971 '64. (MIRA 18:3)

1. Moskovskiy vecherniyy metallurgicheskiy institut.

YAKUSHEV, A.M.

Deformations of welded crane girders under the heavy performance conditions of bridge cranes. Prom. stroi. 41 no.4:48-50 Ap '64. (MIRA 17:9)

1. Gosudarstvennyy institut po proyektirovaniyu, issledovaniyu i ispytaniyu stal'nykh konstruktsiy i mostov.

SMOLYARENKO, V.D.; YAKUSHEV, A.M.; YEDNERAL, F.P.

Density and surface tension of lime-alumina slags with additions of SiO_2, MgO and Na_3AlF_6. Izv. vys. ucheb. zav.; chern. met. 8 no.1:55-60 '65 (MIRA 18:1)

1. Moskovskiy vechernly metallurgicheskiy institut.

SMOLYARENKO, V.D.; YAKUSHEV, A.M.; YEDNERAL, F.P.

Viscosity and surface properties of synthetic white slag with additions of Al_2O_3, CaF_2 and Na_3AlF_6. Izv.vys.ucheb.zav.; chern.met. 8 no.6:72-77 '65. (MIRA 18:8)

1. Moskovskiy vechernyy metallurgicheskiy institut.

YAKUSHEV, A. P.

ROBINZON, Ye.A.; YAKUSHEV, A.P.

New method for determining the ring structure of petroleum fractions. Izv.Kazan.fil.AN SSSR Ser.khim.nauk no.1:135-147 '50.
(MLRA 10:5)

(Petroleum products) (Ring formation)

USSR/Chemistry - Petroleum (Contd) 1 Jan 51

"Determination of the Cyclic Composition of Kerosene Fractions," Ye. A. Robinzon, A. P. Yakushev

"Dok Ak Nauk SSSR" Vol LXXVI, No 1, pp 81-84

Exmd narrow ($\sim 5^{\circ}$) fractions of kerosene boiling at 200-300°C with regard to their cyclic compn, i.e., relative content of aromatics, naphthenes, and paraffins) according to method developed by authors. Detd aromatics either by sulfonation or hydrogenation. Results checked, but found 1st procedure preferable. By comparing const of initial distillation fractions with those of artificial mixt, found aromatics of

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USSR/Chemistry - Petroleum (Contd) 1 Jan 51

kerosene to be chiefly homologues of tetralene, phenylcyclopentane, and hydroindene (homologues of benzene in the low-boiling fraction). On segg aromatics, detd "cyclic compn" of nonaromatic fraction. Found alkanes predominate in it. Method is considered as precise as those used abroad, while at same time giving more complete data.

178T9

YAKUSHEV, A. P.

KAZAKOV, I.V., inzh.; BUYANOV, Yu.P., inzh.; ROMANOV, A.A., inzh.; TSAREGRADSKIY, A.V., inzh.; YAKUSHEV, A.P., inzh.; ZHUKOV, K.V., kand. arkh.; GOLOVIN, V.V., inzh.; LOS', A.A., inzh.; CHERKINSKAYA, R.L., red. izd-va; SHERSTNEVA, N.V., tekhn. red.

[Catalog of asbestos-cement products and elements for residential buildings] Katalog asbestotsementnykh izdelii i konstruktsii dlia zhilykh domov. Moskva, Gosstroiizdat, 1963. 34 p. (MIRA 16:6)

1. Akademiya stroitel'stva i arkhitektury SSSR. TSentral'nyy nauchno-issledovatel'skiy i proyektno-eksperimental'nyy institut industrial'nykh zhilykh i massovykh kul'turno-bytovykh zdaniy. 2. TSentral'nyy nauchno-issledovatel'skiy i proyektno-eksperimental'nyy institut industrial'nykh zhilykh i massovykh kul'turno-bytovykh zdaniy (for Kazakov, Buyanov, Romanov, TSaregradskiy, Yakushev, Zhukov). 3. Gosudarstvennyy trest po proyektirovaniyu zhilykh i obshchestvennykh zdaniy, ikh oborudovaniya i blagoustroystva naselennykh mest (for Golovin, Los').

(Asbestos cement)
(Apartment houses--Design and construction)

ATANAZEVICH, Yekaterina Ivanovna; YAKUSHEV, Aleksey Petrovich; DYRIN, Vasiliy Grigor'yevich; PUTOKHIN, N.I., prof., doktor khimicheskikh nauk, nauchnyy red.; PETROPOL'SKAYA, N.Ye., red.; YASHKIN'KINA, Ye.A., tekhn.red.

[What is produced from petroleum and gas] Chto poluchaiut iz nefti i gaza. Kuibyshev, Kuibyshevskoe knizhnoe izd-vo, 1958. 28 p. (MIRA 12:9)

(Petroleum chemicals) (Gas, Natural)

YAKUSHEV, B.I. [IAkushau, B.I.]

Dynamics of exchangeable potassium in swampy soils. Vestsi AN BSSR.Ser.biial.nav. no.4:102-111 '59. (MIRA 13:4)
(Sharkovshchina District--Soil chemistry)
(Potassium)

YAKUSHEV, B. I., CAND BIO SCI, ~~THE~~ "DYNAMICS OF NITRATES, MOBILE PHOSPHATES, AND METABOLIC POTASSIUM IN ~~WATER-LOGGED~~ swampy SOILS." MINSK, 1960. (BELORUS STATE UNIV IM V. I. LENIN). (KL, 2-61, 206).

YURKEVICH, I.D., red.; MIKHAYLOVSKAYA, V.A., red.; NESTEROVICH, N.D., red.; RAKHTEYENKO, I.N., red.; SMOLYAK, L.P., red.; YAKUSHEV, B.I., red.

[Effect of soil conditions on the growth of woody plants] Vliianie pochvennykh uslovii na rost drevesnykh rastenii. Minsk, Izd-vo "Nauka i tekhnika," 1964. 113 p. (MIRA 17:5)

YAKUSHEV, B.I. [IAkushau, B.I.]

Problem of the balance of plant nutrition in meadow lands. Vestsi AN BSSR Ser. biial. nav. no.3:36-40 '64 (MIRA 18:1)

YAKUSHEV, B.I.

Determination of the transpiration intensity in plants by capillary tubes. Dokl. AN BSSR 8 no.7:471-472 '64. (MIRA 17:10)

1. Institut eksperimental'noy botaniki i mikrobiologii AN BSSR. Predstavleno akademikom AN BSSR N.D. Nesterovichem.

YAKUSHEV, B.I.

Effect of vegetation, soil-forming rocks and groundwaters on the absorptive soil complex. Bot. inst. Bel. otd. VBO no.6,75-84 '64. (MIRA 18:7)

RAKHTEYENKO, I.N. [Rakhtaeenka, I.N.]; YAKUSHEV, B.I. [IAkushau, B.I.]

Ecological conditions of the growth of small-leaved linden in city parks and methods for their improvement. Vestsi AN BSSR. Ser. biial. nav. no.3:29-34 '65. (MIRA 18:11)

YAKUSHEV, B.I.; KROT, L.A.

Effect of the herbaceous soil cover on the growth of pine plantations. Bot.; issl.Bel.otd.VBO no.7:142-148 '65.
(MIRA 18:12)

YAKUSHEV, B.I.

Characteristics of the determination of the sum of absorbed bases in soils by the G. Kappen method. Dokl. AN BSSR 9 no.9:618-620 S '65. (MIRA 18:11)

1. Institut eksperimental'noy botaniki i mikrobiologii AN BSSR. Submitted July 10, 1964.

1. YAKUSHEV, D.

2. USSR (600)

4. Sleighs and Sledges

7. Sledge trailer for automotive vehicles. Sel'. stroi. 2, no. 1, 1947.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

YAKUSHEV, F.M.; POPOV, V.M.

Improving the foam lifter of the Trofimov system. Transp. i khran. nefti i nefteprod. no.12:23 '64. (MIRA 18:2)

1. Saratovskoye upravleniye GNS RSFSR.

YAKUSHEV, F.N., starshiy inzh.; GUN, R.B.; CHAYKO, A.L.

Automatic control in the desalting of oil. Neftianik 6 no.8:14-16 Ag '61. (MIRA 14:10)

1. Chernikovskiy neftepererabatvyayushchiy zavod (for Yakushev).
2. Sotrudniki Spetsial'nogo konstruktorskogo byuro po avtomatike v neftepererabotke i neftekhimii (for Gun, Chayko).
(Petroleum--Refining) (Automatic control)

YAKUSHEV, G.I., inzh. (Chelyabinsk)

Testing of the EV-3 devices. Energetik 13 no.8:14-16 Ag '65.
(MIRA 18:9)

YAKUSHEV I. R.

ANIKEYEV, N.P., glavnyy red.; BISKE, S.F., red.; BOBYLEVSKIY, V.I., red.: VAS'KOVSKIY, A.P., red.; VERESHCHAGIN, V.N., red.; DRABKIN, I.Ye., red.; YEVANGULOV, B.B., red.; YEFIMOVA, A.F., red.; ZINKIN, A.V., red.; LARIN, M.I., red.; LIKHAREV, B.K., red.; MEINNER, V.V., red.; MIKHAYLOV, A.F., red.; NIKOLAYEV, A.A., red.; POPOV, G.G., red.; POPOV, Yu.N., red.; SAKS, V.N., red.; SEMEYKIN, A.I., red.; SIMAKOV, A.S., red.; TITOV, V.A., red.; SHILO, N.A., red.; EL'YANOV, M.D., red.; YAKUSHEV, I.R., red.; V redaktirovanii prinimali uchastiye: ANDREYEVA, O.N., red.; BAYKOVSKAYA, T.N., red.; BOLKHOVITINA, N.A., red.; BORSUK, M.O., red.; VASIL'YEV, I.V., red.; VASILEVSKAYA, N.D., red.; VOYEVODOVA, Ye.M., red.; YEVSEYEV, K.P., red.; KIPARISOVA, L.D., red.; KRASNYY, L.I., red.; KRISHTOFOVICH, L.V., red.; KULIKOV, M.V., red.; LIBROVICH, L.S., red.; MARKOV, F.G., red.; MODZALEVSKAYA, Ye.A., red.; NIKIFOROVA, O.I., red.; OBUT, A.M., red.; PCHELINTSEVA, G.T., red.; RZHONSNITSKAYA, M.A., red.; SEDOVA, M.A., red.; STEPANOV, D.L., red.; TIMOFEYEV, B.V., red.; KHUDOLEY, K.M., red.; CHEMEKOV, Yu.F., red.; CHERNYSHEVA, N.Ye., red.. DERZHAVINA, N.G., red.izd-va; GUROVA, O.A., tekhn.red.

(Continued on next card)

ANIKEYEV, N.P.---(continued) Card 2.
[Decisions of the Interdepartmental Conference on the Unified Stratigraphic Columns of the Northeastern Part of the U.S.S.R.]
Reshenila Mezhvedomstvennogo sovenhchanila po razrabotke unifitsirovannykh stratigraficheskikh skhem dlia Severo-Vostoka SSSR, Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr, 1959. 65 p. (MIRA 13:2)

1. Mezhvedomstvennoye soveshchaniye po razrabotke unifitsirovannykh stratigraficheskikh skhem dlya Severo-Vostoka SSSR, Magadan, 1957.
(Soviet Far East--Geology, Stratigraphic)

YAKUSHEV, I. S., (Engr)

Stability of Motion, Vibration, Regulation

Dissertation: "Determination of Natural Vibrations of Beam and Frame Constructions (Approximate Method of Calculation)." Cand Tech Sci, All-Union Correspondence Polytechnic Inst, Ministry of Higher Education USSR, 5 Apr 54. (Vechernyaya Moskva, Moscow, 26 Mar 54)

SO: SUM 213, 20 Sep 1954

SOV/124-58-7-7952

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 7, p 94 (USSR)

AUTHOR: Yakushev, I.S.

TITLE: A Practical Method for the Calculation of the Natural-vibration Frequencies of Beam and Frame Structures (Prakticheskiy sposob rascheta chastot sobstvennykh kolebaniy balochnykh i ramnykh konstrutsiy)

PERIODICAL: Sb. statey Vses. zaochn. politekhn. in-ta, 1957, Nr 17, pp 93-104

ABSTRACT: Bibliographic entry

1. Structures--Vibration 2. Mathematics--Applications

Card 1/1

YAKUSHEV, I. S., Cand Tech Sci -- (diss) "Practical method of calculating the frequency of natural oscillations of beam and frame structures." Moscow, 1960. 19 pp with charts; (Ministry of Higher and Secondary Specialist Education RSFSR, All-Union Correspondence Polytechnic Inst, Chair of Construction Structures); 150 copies; price not given; (KL, 26-60, 140)

YAKUSHEV, M. G.

"Serious Shortcomings in the Retraining of Managers in the Rayon Offices and Departments of Communications," Vest. Svyazi, No.3, pp 30, 1954

Chief of the Interrayon Communications Section, Molotov Oblast' Communications Admin.

Translation Trans. No.533, 6 Apr 56

BELIKOV, Boris Stepanovich; VARSHAVSKIY, Boris Georgiyevich; GUSEV, Simon Stepanovich; KOROBOV, Yuriy Mikhailovich; PAPERNOV, Lev Zakharovich; PETROVSKIY, Stepan Ignat'yevich, [deceased]; YAKUSHEV, M.I., redaktor; PAPINAKO, I.G., redaktor; LEDNEVA, N.V., tekhnicheskiy redaktor

[Postal and telegraph agent] Pochtovo-telegrafnyi agent. Moskva, Gos.izd-vo lit-ry po voprosam sviazi i radio, 1955. 254 p. (MLRA 9:4)
(Postal service) (Telegraph)

YAKUSHEV, N.Ya., inzh.

Ways of increasing the labor productivity in mining steeply dipping seams. Ugol' Ukr. 6 no.6:4-6 Je '62. (MIRA 15:7)
(Donets Basin--Coal mining machinery)

YAKUSHEV, N.Ya., gornyy inzh.

Increase the participation of volunteers in improving the technical and economic indices of mine operations. Ugol' Ukr. 7 no.6:32-33 Je '63. (MIRA 16:8)

YAKUSHEV, V.Z.

Dynamic problems in the theory of thin shells. Izv.Kazan. fil. AN SSSR.Ser. fiz.-mat. i tekh. nauk no.14:97-108 '60. (MIRA 14:11)

(Elastic plates and shells)

L 18468-63 EWP(r)/EWT(m)/BDS AFFTC S/0124/63/000/008/V016/V016

ACCESSION NR: AR3006445

52

SOURCE: RZh. Mekhanika, Abs. 8V116

AUTHOR: Yakushev, N. Z.

TITLE: Nonlinear vibrations of a cylindrical shell 24

CITED SOURCE: Sb. aspirantsk. rabot. Kazansk. un-t. Tochny*ye n. Kazan', 1962, 216-225

TOPIC TAGS: cylindrical shell, deformation, vibration, inertial force, trigonometric series

TRANSLATION: The equation of motion of a cylindrical shell is studied, taking account of the terms of quadratic relative deformation, neglecting the longitudinal force of inertia and the forces of rotational inertia. A system of three equations in variables reduces to one which is separated into a quasilinear equation of the seventh order in partial derivatives, if certain terms of the equation of the original system are not neglected. Choosing the circular variables in the form of a double trigonometric series the coefficients of which depend on time, the author obtains after substitution in the separated equation a nonlinear function, and use

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L 18468-63
ACCESSION NR: AR3006445

of the condition of its orthogonality to the displacement function permits one to write the equation of the definite characteristic frequency. It is shown from examples that in the case of linear oscillations the tangential forces of inertia work towards diminishing frequency. Taking account of the nonlinear terms, if the inertial terms are neglected, the natural frequency is increased, but the nonlinear dynamic terms decrease it. V. M. Kornov

DATE ACQ: 28Aug63 SUB CODE: AP ENCL: 00

Card 2/2

L 4716-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k) IJP(c) WW/EM

ACC NR: AR6000726 SOURCE CODE: UR/0124/65/000/009/V016/V017

AUTHOR: Yakushev, N. Z. 42 B

TITLE: Induced vibrations in cylindrical shell of medium length

SOURCE: Ref. zh. Mekhanika, Abs. 9V118 24

REF SOURCE: Sb. Issled. po teorii plastin i obolochek, No. 2, Kazan', Kazansk. un-t, 1964, 104-110

TOPIC TAGS: cylindric shell, differential equation, vibration, vibration damping, shell theory, WAVE NUMBER, MOTION EQUATION

ABSTRACT: A system of three differential equations of motion in the displacements leads to a single resolvent by introducing the displacement function F. Viscous vibration damping in the material is included. The solution of the set of equations in the following cases -- 1) - two edges of the shell hinged, 2) - one end supported and the other end fixed, and 3) - both ends fixed -- yields the respective displacement functions F, in the form

$$F = \sum F_{n\lambda} \sin\lambda\alpha \sin n\beta$$

$$F = \sum F_{n\lambda} (\sin 1/2\,\lambda\alpha + \sin 3/2\,\lambda\alpha) \sin n\beta$$

$$F = \sum F_{n\lambda} (1 - \sin 2\lambda\alpha) \sin n\beta \quad (*),$$

where $\lambda = m\pi R/l$; $\alpha = x/R$; $\beta = y/R$; $m = 1, 3, \ldots$; m is the longitudinal half-wave number; n is the

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L 47146-66

ACC NR: AR6000726

circumferential wave number; x, y are the coordinate axes. Integration of the resolvent equation is brought about to determine the natural vibration frequencies by the Bubnov-Galerkin method, including the relationship (*). The frequency equations obtained are of third order. Integration of the resolvent equation in the case of induced shell vibration is carried out by the A. N. Krylov method (Vibratsiya sudov. M., ONTI, 1936). As an example the following special cases of loading are considered: when a constant uniformly distributed load is applied suddenly to the shell surface and when the applied vibration load is given by a harmonic law. V. G. Suvornev

[Translation of abstract]

SUB CODE: 20

Card 2/2 afs

YAKUSHEV, F. M.

N. N. Rovinskiy (ed.), I. D. Sher, S. I. Vetselin, V. F. Girov Kiy, F. M. Yakushev, and Ye. S. Tul'chinskiy, Organizatsiya Finansirovaniya i Kreditovaniya Kapital'nykh (Organization of Financing and Crediting in Capital Investment), Moscow: Vlozhenly, 1951, 375 pp.

For complete translation of text, see Trans 351, 28 Feb 55

KUPERMAN, Yakov Mironovich, kand.ekon.nauk; YAKUSHEV, Pavel Mikhaylovich. Prinimal uchastiye: GINDIN, I.F., kand.ekon.nauk; BIRMAN, A.M., kand.ekon.nauk, red.; KUTSKNOVA, A.A., red.izd-va; EL'KINA, E.M., tekhn.red.; GILENSON, P.G., tekhn.red.

[Working capital of construction organizations] Oborotnye sredstva stroitel'nykh organizatsii. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1959. 159 p. (MIRA 12:8)

(Construction industry--Finance)

YAKUSHEV, S.A.

Main problems of biological science and ways for their solution.
Agrobiologiia no.4:483-504 Jl-Ag '62. (MIRA 15:9)

1. Chelyabinskiy gosudarstvennyy pedagogicheskiy institut.
(BIOLOGY--PHILOSOPHY)

STUKOV, A.P.; YAKUSHEV, S.A.

Corpuscular genetics and the general progress of biological science. Agrobiologiia no.4:631-637 Jl-Ag '64. (MIRA 17:12)

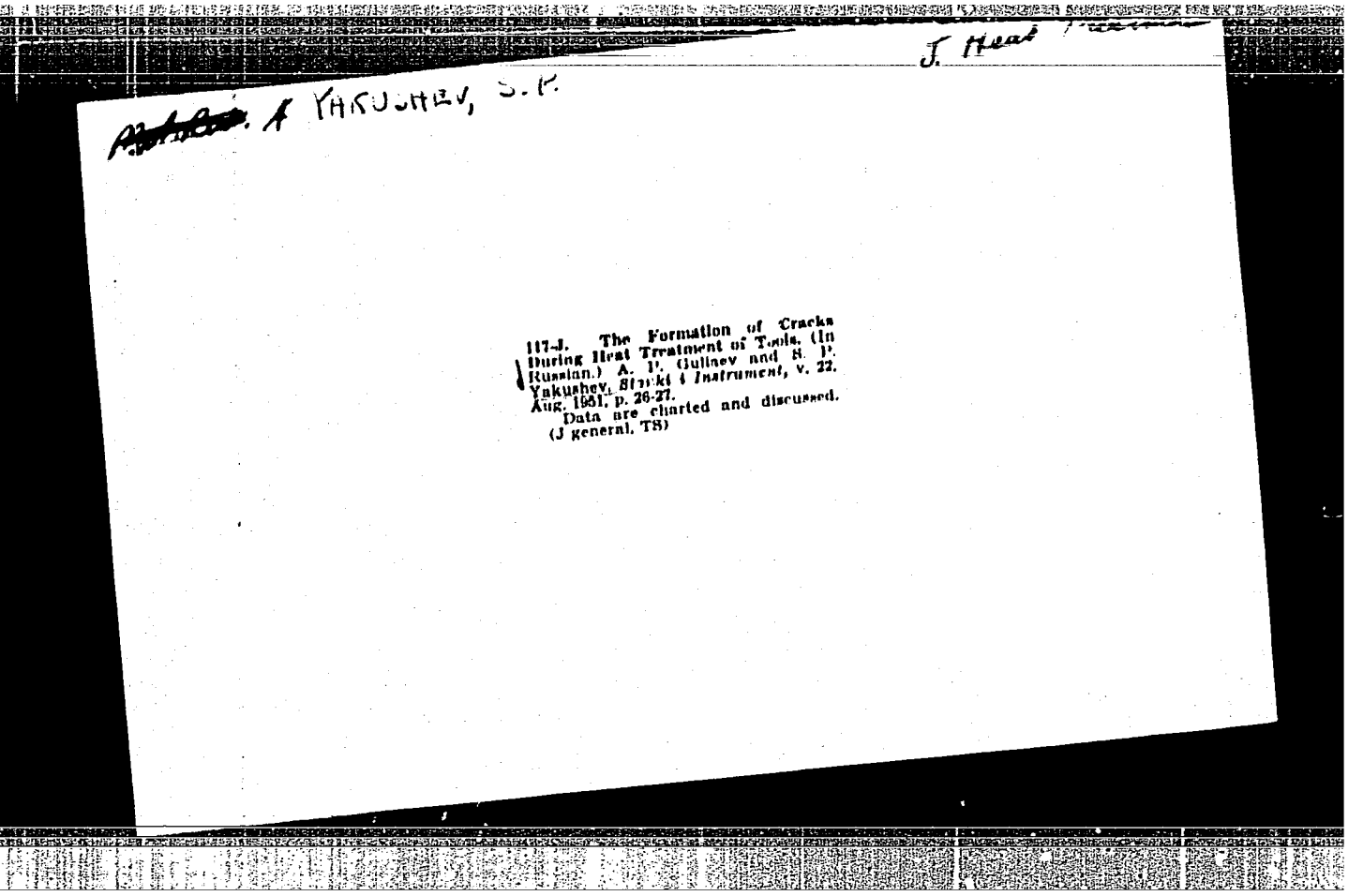
YAKUSHEV, S.A. (Chelyabinsk)

Michurin's biological theory at the latest level of understanding of the nature of the living body. Agrobiologiia no.5:643-664 S-O '64.

YAKUSHEV, S.M., ispolnyayushchiy obyazannosti inzhenera

Our requirements from the Soviet industry. Vest. sviazi 22 no.9:30 S '62. (MIRA 15:9)

1. Dnepropetrovskaya direktsiya radiotranslyatsionnykh setey.
(Radio--Equipment and supplies)



J. Heat

A. A YAKUSHEV, S.P.

117-J. The Formation of Cracks During Heat Treatment of Tools. (In Russian.) A. P. Gulinev and S. P. Yakushev. *Stanki i Instrument*, v. 22, Aug. 1951, p. 26-27.
Data are charted and discussed.
(J General, TS)

YAKUSHEV, S.S., fel'dsher

Work of an anesthetist. Med. sestra 22 no.10:43-46 O'63
(MIRA 16:12)

1. Iz Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni M.F.Vladimirskogo.

ALEKSEYEV, P.P., prof., KOZLOV, V.P.; VASIL'YEVA-DRYUKOVA, M.Kh.; YAKUSHEV, S.Ya.; ZAYKOVSKIY, I.Ya.

Compound treatment of acute and chronic renal insufficiency using hemodialysis. Sov. med. 28 no.5:98-102 My '65. (MIRA 18:5)

1. Klinika fakul'tetskoy khirurgii (zav. - prof. P.P.Alekseyev) Smolenskogo meditsinskogo instituta.

GORELIK, Z.; YAKUSHEV, T.

Use of machinery in sorting onions. Sov. torg. 36 no.10:51-52 O '62. (MIRA 16:2)

(Onions)
(Sorting devices)

KHITROVA, M.I., inzh.; YAKUSHEV, V.G.

Experimental plastic absorption refrigeration operating on gas. Ispol'. gaza v nar. khoz. no.2:78-86 '63. (MIRA 18:9)

1. Laboratoriya nemetallicheskikh materialov Saratovskogo gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta po ispol'zovaniyu gaza v narodnom khozyaystve.

YAKUSHEV, V.I., inzh.; BOL'SHUKHIN, I.D., inzh.

Using anchors for ship checking during launching.
Sudostroenie 26 no.3(209):54-57 Mr '60. (MIRA 14:11)
(Anchors)
(Ships--Launching)

SHCHASTNYY, P.M.; YAKUSHIN, V.I.; SHOR, V.I.

Improving the technology of pouring killed steel. Metallurg 3 no.12:15-16 D '63. (MIRA 17:4)

YAKUSHEV, V. I.

ALIKAYEV, V. A. and YAKUSHEV, V. I. On food poisonings of animals. (Per material submitted to the editorial office.)

So: Veterinariya; 23; 5-6; May/June 1946; Uncl.
TABCON

YAKUSHEV, V. I.

YAKUSHEV, V. I. Infectious equine encephalomyelitis. (Per material submitted to the editorial office.)

So: Veterinariya; 23; 7; July 1946; Uncl.
TABCON

USSR/Medicine - Veterinary Medicine May 1947
Medicine - Encepholomyelitis

"Therapy and Prophylaxis of Infectious Encephalomyelitis in Horses," V. I. Yakushev, VIEV, 4 pp

"Veterinariya" No 5

Account of experiments carried out on rabbits and mice to combat this disease. Various viruses from 1 DLM to 10 DLM were injected into the spinal fluid. One method of prophylaxis was covering horses with a 3 percent solution of creoline with .5 percent naphthalene during their working day.

1776

YAKUSHEV, V. I.

33395. Sroki.Evakuatsii Korma U Korov. Sov. Zootekhniya, 1949, No. 6, c. 27-31.

SO. Letopis' Zhurnal'nykh Statey, Vol. 45, Moskva, 1949

YAKUSHEV, V. I.

PA 167T1

USSR/Biology - Animal Husbandry
Cold, Resistance to

Feb 50

"New Michurian Method of Rearing Young Animals," V. I. Yakushev, Cand Vet Sci, All-Union Inst of Exptl Vet Med

"Veterinariya" No 2, pp 28-32

Methods and results of raising calves of highly productive Kostroma breed, in unheated barns at subzero weather to produce cold resistance. Barn construction and operation. Mentions successful work by S. I. Shteynman. Includes graph, table, photographs, and drawing.

167T1

YAKUSHEV, V. I. , Cand. of Vet.Sci.
"Gas-energy metabolism in calves raised in unheated quarters"
SO: Veterinariia 28(1), 1951, p. 20

YAKUSHEV, V.I. (Cand. Sci. Assoc., VIEV)

"Vascular Reaction in Equine Encephalomyelitis,"

SO: Trud VIEV, Vol 10, No 2, 1952 pp 103.

YAKUSHEV, V. I.

"Scientific Methods of Raising Calves and Young Pigs at Low Temperatures." Dr Biol Sci, All-Union Inst of Experimental Veterinary Sci, Moscow, 1953. (RZhBiol, No 4, Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

So: Sum. No. 481, 5 May 55

Country : USSR
Catogory : Farm Animals.
Swine. Q-3
Abs. Jour : Ref Zhur-Biol., No 16, 1958, 74075

Author : Yakushev, V. I.
Institut. : All-Union Institute of Experimental Veterinary
Title : The Rhythmic Character of Growth in Swine.

Orig Pub. : Tr. Vses. in-ta eksperim. veterinarii, 1957, 20, 270-273

Abstract : The study was conducted on 450 immature sows of the Udarnik sovkhoz, Saratovskaya oblast'. They were weighed daily before being fed (feeding was uniform). Each period of intensive increase in live weight was followed by its decrease which sometimes reached a negative growth rate, i. e., weight did not increase but showed a decrease.

* Science

Card: 1/1

60

L 9094-65 ASD(a)-5/AFMD(p)/ESD(dp)
ACCESSION NR: AP4041960 S/0280/64/000/003/0062/0068

AUTHOR: Alekseyev, O. G. (Leningrad); Yakushev, V. I. (Leningrad)

TITLE: An algorithm for the optimum reservation of standby equipment

SOURCE: AN SSSR, Izv. Tekhnicheskaya kibernetika, no. 3, 1964, 62-68

TOPIC TAGS: automation, standby reserve, systems design, system optimization, optimization algorithm, optimal equipment reserve, dynamic programming

ABSTRACT: The dynamic programming method of R. Bellman is applied to evaluation of the optimum reserve of standby elements of a system which consists of k different types of elements, where the i^{th} element has a failure

problem to a multi-step problem which takes into account the importance of various limitations after each step, the most important limitation being one with respect to which the possibility of reservation is minimal. When there are many types of elements in the system, the problem complexity exceeds the memory capability of the existing computers so that the optimization procedure is [illegible] each limitation, [illegible] and coefficients A. According to Bellman, the sequence of variations for the [illegible] of reservation scheme are characterized by their probabilities of failure [illegible]

[illegible] sequence gives the optimum number of elements of k^{th} type and the last term of the [illegible] sequence. The last term of the $(k-1)^{st}$ sequence gives the number [illegible]

L 9094-65
ACCESSION NR: AP4041960

optimum numbers of all elements are determined. A numerical example is given for k = 3, for which a dynamic programming block diagram is drawn. Minimal memory requirements result when sequences of the most reliable elements are considered first. In conclusion, the authors wish to express their deep appreciation to Ye. S. Venttsel', I. Ya. [illegible] [illegible] Kaklanov and [illegible] for their valuable suggestions and remarks. Orig. art. has: 18 equations [illegible]

ASSOCIATION: none

SUBMITTED: 03May63 ENCL: 00 SUB CODE: DP, MA

NO REF SOV: 000 OTHER: 003

Card 3/3

ACCESSION NR: AP4043562 S/0146/64/007/004/0077/0085

AUTHOR: Alekseyev, O. G.; Yakushev, V. I.

TITLE: Combination method for estimating the optimum reserve system

SOURCE: IVUZ. Priborostroyeniye, v. 7, no. 4, 1964, 77-85

TOPIC TAGS: reserve, reserve system, reserve system reliability, reliability prediction

ABSTRACT: A method for estimating the optimum reserving system by dynamic programing is suggested. In an unreserved system of N types of elements, the probabilities of the failure of these elements are $q_1, q_2, \ldots q_N$ and their weights are $\omega_1, \omega_2, \ldots \omega_N$. The failures are stochastic and independent events. Each element in the system is to be so reserved that the probability Q_s of the system failure is lower than the permissible value Q_p, while the system weight W_s is minimum. Hence, the number of elements m_k of each type should be determined to satisfy these equations:

$$Q_s = 1 - \prod_{k=1}^{N} (1 - q_k^{m_k}) \leqslant Q_p$$

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ACCESSION NR: AP4043562

with

$$W_s = \min\left(\sum_{k=1}^{N} m_k \omega_k\right), \quad m_k = 1,2,3 \ldots$$

As the solving of this problem on a computer is difficult, an equivalent problem is suggested in which the probability of the system failure is minimized, while the system weight determined by an approximate method serves as a limitation. An algorithm and a scheme of the program realizing the algorithm are developed and illustrated by a numerical example. The above dynamic-programing method is claimed to considerably reduce the calculating work. Orig. art. has: 1 figure, 33 formulas, and 5 tables

ASSOCIATION: Voyennaya artilleriyskaya akademiya (Military Artillery Academy)

SUBMITTED: 09Mar63

SUB CODE: IE NO REF SOV: 001 ENCL: 00 OTHER: 003

Card 2/2

SIGOV, A.P.; YAKUSHEV, V.M.

Materials on the geology of Cenozoic-type effusives in the trans-Ural region. Sov.geol. 6 no.2:143-[illegible] F '63. (MIRA 16:4)

1. Ural'skoye geologicheskoye upravleniye.
(Ural Mountain region—Rocks, Igneous)

YAKUSHEV, V.P.

Subject : USSR/Mining AID P - 3620

Card 1/1 Pub. 78 - 4/20

Authors : Shreyner, L. A., V. P. Yakushev, O. P. Petrova and A. T. Portnova

Title : Classification of rocks according to their mechanical characteristics

Periodical : Neft. khoz., v. 33, #10, 15-23, O 1955

Abstract : The author makes an analysis of the purely mechanical characteristics of rocks that are important for proper use of drilling equipment in penetrating the formations. An apparatus is described which was used to determine the compressive strength, resilience, plasticity and breaking point of brittle, plastic-brittle, and non-brittle rocks. Some data of those tests are given. 4 references, 1949-1955.

Institution : None

Submitted : No date

PHASE I BOOK EXPLOITATION 976

Shreyner, Leonid Aleksandrovich, Petrova, Ol'ga Pavlovna, Yakushev, Vasiliy Petrovich, Portnova, Anna Timofeyevna, Sadilenko, Konstantin Mikhaylovich, Kiochko, Nikolay Aleksandrovich, Pavlova, Nina Nikolayevna, Balandin, Pavel Stepanovich, Spivak, Aleksandr Ivanovich

Mekhanicheskiye i abrazivnyye svoystva gornykh porod (Mechanical and Abrasive Properties of Rocks) Moscow, Gostoptekhizdat, 1958. 200 p. 3,000 copies printed.

Gen. Ed.: Shreyner, L.A., Professor; Executive Ed.: Kovaleva, A.A.; Tech Ed.: Polosina, A.S.

PURPOSE: The book is intended for scientists, engineers and technicians engaged in drilling operations in the petroleum and mining industries.

COVERAGE: The book describes methods of evaluating the mechanical properties of rocks by means of the stamp-pressing technique. This method makes it possible to determine simultaneously the hardness, plas-

Card 1/6

ticity, and elastic modulus of rocks. Rocks of different mineralogical composition and structure are described and classified by their abrasive properties. Basic factors in the relationship of wear on the mineralogical composition, load, and speed of rotation are shown. A classification table of sedimentary rocks is also given. The information provided in the book should promote the better use and design of drilling instruments, and operational procedures in different geologic media. Professor V.V. Zaleskiy is cited as having made important contributions to this field. There are 64 diagrams, 70 tables, and 39 bibliographic references, of which 28 are Soviet, 3 German and 8 English.

TABLE OF CONTENTS:

Mechanical and Abrasive (Cont.) 976

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Card 5/6

MM/sfm
1-8-59

YAKUSHEV, V.P.

14(5) PHASE I BOOK EXPLOITATION SOV/1393

Akademiya nauk SSSR. Institut nefti

Trudy, t. 11. Neftepromyslovoye delo (Transactions of the Petroleum Institute, Academy of Sciences, v. 11. Oil Field Industry) Moscow, Izd-vo AN SSSR, 1958. 346 p. 2,000 copies printed.

Resp. Ed.: Krylov, A.P.; Ed. of Publishing House: Savina, Z.A.; Tech. Ed.: Kiseleva, A.A.

PURPOSE: This book is intended for geological engineers specializing in oil well drilling and oilfield operations.

COVERAGE: This book, a collection of 26 articles, describes the mineral composition of hard, friable, and plastic rocks, their deformation and destruction at various geological platforms of the Soviet Union; it further presents designs of rock bits with different cutters, which can be successfully used for crushing various formations. The effect of electric current on binding

Card 1/10

substances such as cement slurry, plaster and lime solutions, as well as their treatment with electric current carried out to accelerate hardening are also discussed. It is stated that electric current may be used for strengthening the walls of a well, and that this promising method has been successfully tested on various cores. Designs of electrodes used for this purpose are presented. Drilling of deep wells with conventional and sectional turbodrills is analyzed, and turbodrill parts described. Oil well drilling in eastern Soviet regions appears to be complicated by an excessive filtration of drilling fluid into formations of various horizons. To overcome this, methods improving the plugging properties of cement slurry are proposed. In this connection the adhesion of stone-like cement to rocks of different composition has been studied with the aid of various apparatus, and the filtration of drilling fluid into formations of Tatar Republic oilfields has been analyzed. Methods of eliminating the negative centrifugal force of presently used deep well pumps are proposed, as are new systems of pump jacks. The restoration of bottom-hole pressure in formations with

varying permeability is investigated on the basis of theoretical calculations and graphs. Attempts to extract petroleum from the loose sands of the Romashkino oilfield by injecting water or certain petroleum products, free of paraffin and tar, are described and results of experiments given. The method of stimulating petroleum flow in various petroliferous provinces by injecting high pressure gas into a partially depleted formation is explained, and some recommendations given. The process of subterranean burning of a part of the petroleum deposit, as a thermal method of petroleum recovery, is discussed, and laboratory experiments illustrated by numerous graphs. Tectonics of soft, clayey rocks are investigated in connection with the problem of caving, and the results of experiments made to ascertain the effect of tension and moisture on the stability of such rocks are analyzed. The influence of pressure on the selective saturation of quartz rocks with water or petroleum, as well as on the saturation of porous rocks is investigated. Laboratory experiments were made in an attempt to find out the saturation rate of various minerals wetted with water after being treated

with various solutions. Tests conducted in connection with the problem of equipment corrosion proved that DC-Na solution is a good inhibitor against corrosion and that sulfide coating is a good protective agent for steel against corrosion. The procedure of turbine drilling under different conditions is analyzed and the advisibility of lowering the upstream pressure of the drilling fluid is emphasized. The prevention of caving by applying various methods is discussed, and the application of a coefficient established on the basis of calculations is recommended. Hydraulic fracturing of formations and the treatment of oil wells with hydrochloric acid are also recommended as efficient methods for boosting crude oil production. The development of natural gas recovery in the Saratov and Stalingrad regions is outlined, and the advantage of the utilization of natural gas on a larger scale is emphasized. Bibliographic references accompany each article.

Transactions of the Petroleum Institute SOV/1393

TABLE OF CONTENTS:

Card 5/10

YAKUSHEV, V. P., Cand Tech Sci -- (diss) "Research into the effect of the mineralogical composition on the mechanical properties of rock under cave-in by a puncher." Moscow, 1960. 15 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Inst of Petrochemical and Gas Industry im I. M. Gubkin); 200 copies; price not given; (KL, 50-60)

YAKUSHEV, V.P.

Transistor attachment for stabilizing currents of high-power electromagnets. Prib.i tekh.eksp. 6 no.5:196-197 S-O '61. (MIRA 14:10)

(Electromagnets) (Transistor circuits)

L 23128-66 EWT(m) DIAAP
ACC NR: AP6001568 (A) SOURCE CODE: UR/0120/65/000/006/0051/0057

AUTHOR: Serbinov, A. N.; Yakushev, V. P.; Rezvykh, K. A.; Marin, N. I.; Povsten', V. A.; Lutikov, V. K.; Doktorova, T. V.

ORG: Institute of Physics and Power Engineering, GKAE, Obninsk (Fiziko-energeticheskiy institut GKAE)

85
68
B

TITLE: Pulsed neutron generator

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1965, 51-57

TOPIC TAGS: neutron generator, pulsed neutron generator, pulse generator, deuteron, ion source, neutron

ABSTRACT: A new pulsed neutron generator constructed for physical studies is described in detail. Deuteron pulses are generated by a h-f type ion source which has a honeycomb extraction system. Both the source and its power supply are placed under an accelerating potential of 300 kv. Vacuum in the accelerating tube, 5×10^{-6} to 2×10^{-5} torr; for an average ion current of 14 ma at the target, the h-v source load current was 250 ma; repetition frequency, 3—1000 cps; neutron yield intensity, 10^{12} neutrons/sec in dT reaction; the highest observed target temperature, 100C.

Card 1/2 UDC: 621.039.555:539.125.5

L 23128-66

ACC NR: AP6001568

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A pulse ion current of 21 ma was obtained under the following conditions: accelerating voltage, 270 kv; repetition frequency, 1000 cps; h-f generator consumption, about 100 w; extracting-pulse amplitude, 11—13 kv; extraction delay, 6 μsec; discharge-pulse time, 8 μsec; extraction-pulse time, 1.4 μsec; target-current time, 1 μsec. "M. V. Sokolov took part in development and alignment; L. A. Kiseleva, L. I. Pashchenko, G. I. Abakumov, N. I. Ushakova, Ye. M. Avilova, Yu. P. Basov, and N. V. Volkov took part in designing. The authors wish to thank B. S. Novikovskiy and V. A. Romanov for their advice; and V. I. Maroke, I. S. Belomyttsev, M. V. Krivenkov, A. I. Malygin, Ye. F. Semenov, V. I. Burlaka, and L. A. Shimkevich for their help in alignment." Orig. art. has: 5 figures.

SUB CODE: 18 / SUBM DATE: 02Nov64 / ORIG REF: 002 / OTH REF: 001

Card 2/2 PB

[illegible]icology. Local Anesthetics.

Abs Jour : Ref Zhur - Biol., No 5, 19[illegible], No 23276

Author : Iakushev V.V.

Inst : Not Given

Title : Thioduatan, as a Local Anaesthetic

Orig Pub : Sb. nauchn. rabot stud. Mosk. vet. akad., 1956, vyp. 3, 32-35

V-3

Abstract : The anaesthetic action of thioduatan (I) was studied in experiments on frogs and rabbits. Following the administration of 0.1% solution of I on the frog's exposed sciatic nerve, the reflexes disappeared in 4-30 minutes. After the administration into the conjunctival sac of rabbits of a 10-20% solution of I the corneal reflex disappeared the first minute and then was restored in 30-50 minutes. In comparison with novocain the anaesthetic action of I took place sooner and lasted longer. I is equally as toxic as II.

Card : 1/1

YAKUSHEV, Yakov Afanas'yevich; YAKUSHEVA, Yekaterina Yakovlevna; DUL'NEV, G.M., otvetstvennyy red.; VOSKRESENSKIY, G.N., red.; TARASOVA, V.V., tekhn.red.; LAUT, V.G., tekhn.red.

[The organization of agricultural teaching in auxiliary schools; based on practical experience] Organizatsiia obucheniia sel'skokhoziaistvennomu trudu vo vspomogatel'noi shkole; iz opyta raboty. Otv. red. G.M.Dul'nev. Moskva, Izd-vo Akad.pedagog.nauk RSFSR, 1957. 86 p. (MIRA 11:2)
(Agriculture--Study and teaching)

MAMYKIN, P.S.; USKUMBAYEV, N.U.; RAVDANIS, B.I.; YAKUSHEV, Ye.A.; PSHENBAYEV, R.G.; SIMKIN, E.A.

Testing high-alumina refractories. TSvet.met. 38 no.3:35-36 Mr '65.
(MIRA 18:6)

L 6956-66 EWT(1)/FCC/EWA(h) GW

ACC NR: AP5026229 SOURCE CODE: UR/0049/65/029/010/1865/1869

29
13

AUTHOR: Glikman, L.G.; Kel'man, V.M.; Yakushev, Ye.M.

ORGAN: Institute of Nuclear Physics, Academy of Sciences, KazSSR (Institut yadernoy fiziki Akademii nauk KazSSR)

TITLE: On the electromagnetic mechanism of cosmic ray acceleration /Report, All-Union Conference on Cosmic Ray Physics held at Apatity, 24-31 August 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya. v. 29, no. 10, 1965, 1865-1869

TOPIC TAGS: Primary cosmic ray, particle acceleration, alternating magnetic field, relativistic particle

ABSTRACT: The relativistic equations of motion of a charged particle moving in the plane of antisymmetry of a varying axially symmetric magnetic field are solved for the case when the azimuthal component of the vector potential in the plane of antisymmetry has the form $f(r/(t - a))/r$, where f is an arbitrary function, r is the distance from the axis, t is the time, and a is a constant. Numerical solutions were computed for a field which alternately increases and decreases between finite limits and remains constant for a time at each limit. For the computations it was assumed that the field strength oscillates between 1.0×10^{-5} and 1.2×10^{-5} Oe with a period of 3.5×10^{5} sec. Some of these solutions are presented graphically and are discussed. The computations show that the ratio of particle energy to field strength is not constant and

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L 6956-66

ACC NR: AP5026229

that particles can be accelerated to high energies by variable magnetic fields which do not increase indefinitely in strength. Orig. art. has: 19 formulas and 4 figures.

SUB CODE: AA SUBM DATE: 00/--Oct65 ORIG. REF: 006 OTH REF: 000

Card 2/2

L 10664-66 EWT(d)/EWT(l) LJP(c) GG

ACC NR: AP5028313 SOURCE CODE: UR/0057/65/035/011/1997/2003

AUTHOR: Glikman, L.G.; Kel'man, V.M.; Yakushev, Ye.M.

ORG: none

TITLE: Solution of the nonrelativistic equations of motion for a charged particle in a certain class of varying electromagnetic fields

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no. 11, 1965, 1997-2003

TOPIC TAGS: charged particle, motion equation, electromagnetic field, mathematic method

ABSTRACT: The solution of the nonrelativistic equations of motion for a certain class of motions of a charged particle in a certain class of varying electromagnetic fields is reduced to quadratures and eliminations. The electromagnetic fields considered are those that are axially symmetric, have a median plane which is a plane of symmetry for the electric field and a plane of antisymmetry for the magnetic field, and for which the radial and axial components of the vector potential vanish in the median plane (in the gauge in which the scalar potential vanishes) and the azimuthal component of the vector potential in the median plane has the form $F(r^2/(at^2 + bt + d))/r$, where r is the distance from the axis, t is the time, a, b, and d are constants, and F represents an arbitrary function. The motions considered are those in which the particle remains in the median plane. The particular form of the vector

Card 1/2

UDC: 537.533.3

L 10664-66

ACC NR: AP5028313

potential was investigated because it leads simply to an integral of motion. The treatment is different depending on whether the polynomial $at^2 + bt + d$ does or does not vanish during the motion, and special discussion is required for the case in which the particle passes through the point $r = 0$. No applications are suggested for the results obtained. Orig. art. has: 38 formulas.

SUB CODE: 20 SUBM DATE: 12Apr65/ ORIG.REF: 003 OTH REF: 001

Card 2/2 pw

L 2194-66 EWT(1) IJP(c)

ACCESSION NR: AP5019234 UR/0056/65/049/001/0210/0213

AUTHOR: Glikman, L. G.; Kel'man, V. M.; Yakushev, Ye. M. 44,55

TITLE: Exact integration of the equations of motion of relativistic charged particles for a certain class of variable electromagnetic fields 21,44,55

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 1, 1965, 210-213

TOPIC TAGS: motion equation, nonlinear differential equation, partial differential equation, first order differential equation, charged particle, relativistic particle

ABSTRACT: The authors obtain an exact solution for the equations of motion of relativistic charged particles in a variable electromagnetic field having rotational symmetry, in which there is a median plane that is perpendicular to the symmetry axis and is a plane of antisymmetry for the magnetic field and a plane of symmetry for the electric field. The motion of the particles in this plane is treated. It is assumed in addition that the charges produce no electric field and that the electrostatic potential is zero. The magnetic component of the field has only an azimuthal component in the median plane. The equations of motion are derived from the relativistic Hamiltonian-Jacobi equation and reduced to a first-order partial

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L 2194-66
ACCESSION NR: AP5019234

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differential equation, which is integrated by the Lagrange-Charpit method. Orig. art. has: 15 formulas.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute of Nuclear Physics, Academy of Sciences, Kazakh SSR)

4/4/65

SUBMITTED: 11Jan65 ENCL: 00 SUB CODE: GP, MA

NO REF SOV: 003 OTHER: 000

Card 2/2 DP

YAKUSHEVA, A.

Hydrogeological expedition. Vest.Mosk.un. 8 no.12:137-139 D '53.
(MLRA 7:2)

1. Nachal'nik ekspeditsii. (Caspian depression--Hydrography)
(Scientific expeditions)

YAKUSHEVA, Aleksandra Fedorovna

nee YAKUSHOVA